Researchers' Guide

Bioethics Commission Educational Materials

The Presidential Commission for the Study of Bioethical Issues (Bioethics Commission) has developed educational materials for use in traditional and nontraditional educational settings to provide educators with contemporary examples of real-life ethical challenges addressed by a presidential commission. The materials are designed to be applicable to a wide variety of disciplines at the undergraduate, graduate, and professional levels as well as continuing education and professional training courses, graduate or professional school seminars, workplace discussions, and other settings.

The purpose of this guide is to highlight the most relevant materials for researchers in many disciplines to illustrate how they might be integrated into researcher education and training. The Human Subjects Research Investigators' Guide provides information specific to human subjects research. This list is not exhaustive; rather, it is meant to serve as a quick reference to some of the most relevant materials.

Research Design

Scientific research is conducted for many purposes and in many disciplines. No matter the purpose or discipline, all researchers share an obligation to employ scientifically sound and ethical research design. Researchers use many methods to conduct scientific investigations; however, research can be considered good science only if it is conducted ethically. Developing a sound research design is an essential first step in conducting ethical research.

The Research Design Background module provides information on the essential elements of ethical research design across disciplines including categories of research, research risk, sample size, data collection and analysis, sharing of results, and validity and related concepts. In addition, it provides information on certain regulatory requirements for research including responsible conduct of research standards and human subjects research protections.

The Research Design in *Gray Matters* module addresses the ethical underpinnings of research design including researchers' professional ethics obligations, research ethics requirements for those conducting certain types of research, and the obligation for all researchers to consider potential societal implications of their work. Integrating ethics early and throughout the course of research facilitates excellence in science and gives researchers a way to meet these obligations in their work.

Public and Community Engagement

Public engagement enables members of the public to participate in consideration of issues of shared interest, including identifying potential impacts that might result from research or new technologies. Community engagement is a subset of public engagement, and focuses on the participation of communities that will be directly affected by the outcome of an action, novel technology, or research.

The Community Engagement in *New Directions* module illustrates the importance of public and community engagement for research on emerging technologies, including synthetic biology, to provide opportunities for members of the public, researchers, and policy makers to share concerns, learn from each other, and work together to support safe and productive research.